

NATURAL RESOURCES CONSERVATION SERVICE

CONSERVATION PRACTICE STANDARD

PRESCRIBED FORESTRY

(Acre)

CODE 409

DEFINITION

Manage forested areas for forest health, wood and/or fiber, water, recreation, aesthetics, wildlife habitat, and plant biodiversity.

PURPOSE

- Maintain or improve forest health.
- Protect soil quality and condition.
- Maintain or enhance water quality and quantity.
- Maintain or improve forest productivity.
- Maintain or improve plant diversity.
- Improve aesthetic and recreational values.
- Improve wildlife habitat.
- Achieve or maintain a desired understory plant community for forest products, grazing, and browsing.

CONDITIONS WHERE PRACTICE APPLIES

- On all forest land.

- On land capable and suited to growing trees.

CRITERIA

General Criteria Applicable to All Purposes

Activities to achieve the intended purpose(s) shall be based on a forest management plan (also called a forest prescription, forest plan, or a forest stewardship plan) that addresses and records the owner's objectives as well as perpetuating a sustainable forest ecosystem based on ecological parameters such as forest types, soil types, past harvest history, natural community types, and successional trends.

A forest management plan that has elements of a more comprehensive conservation plan shall recognize other requirements of the conservation plan and be compatible with its other requirements.

The forest management plan should include an inventory of the existing forest condition and a description of desired forest condition using ecological site descriptions as guides, where available.

The plan shall be developed for a minimum management period of ten years. The plan shall include a schedule of practices and activities appropriate for the time period in order to meet the plan objectives. The practices and activities will be described in sufficient detail that the client understands what and how they are to be implemented.

Describe and give rationale for selection of silvicultural system planned including expected ecological and economic outcomes.

Planned activities shall be examined collectively. Coordinate and time activities to optimize the stated purposes of conservation practices. Activities are not limited to conservation practices.

Planned activities shall lead to a distribution of age classes and stocking density appropriate to forest conditions desired, landowner objectives, and local ecosystems.

The forest management plan must address:

- Afforestation/reforestation issues.
- Fish and wildlife habitat needs, current and future.
- Air, soil, and water quality.
- Wetlands protection and enhancement.
- Forest health, protection, and sustainability measures.
- Special sites or cultural resources.
- Threatened/endangered species.
- Noxious/invasive species.

Additional Criteria to Protect Soil Quality and Condition

Follow written guidelines, such as Tennessee Forestry Best Management Practices, to protect the soil resource during and after harvest operations and site preparation for planting.

Control or prevent erosion. Soil loss will not exceed allowable average annual soil loss (T) as defined by current, approved erosion prediction technology.

Minimize impacts on landscape when placing roads, harvest trails, and landings.

Seed disturbed areas for erosion and sediment control.

Maintain adequate cover to control soil erosion.

Prevent gully formation.

Avoid soil compaction during all activities occurring in the forest.

Additional Criteria to Maintain Water Quality and Quantity

Follow written guidelines, such as Tennessee Forestry Best Management Practices, to maintain the quality and quantity of water flowing from and through forest lands.

Ensure road location, design, construction maintenance, and vegetation reestablishment to reduce water pollution.

Use and maintain filter strips or buffers to remove or reduce the transportation of sediment or organic matter into streams, lakes, or other sensitive areas.

Plan for and design stream crossings where needed. Avoid altering stream courses and drainage patterns.

Avoid adversely altering stream courses and draining patterns. Altering stream courses for stream habitat improvement must be done in accordance with NRCS practice standard 395, Stream Habitat Improvement and Management, and in compliance with all Federal, State, and local regulation and permitting requirements.

Additional Criteria to Maintain Forest Productivity

Sustainable harvest levels shall be based on one or more of the following:

- Clearly documented growth and regeneration data.
- Site index models.
- Site productivity or culmination of mean annual increment (CMAI) growth.
- Desired future condition.
- Consideration of cyclical and natural disturbances.

Develop written guidelines on protecting the residual forest, including regeneration during and following harvest operations.

Identify tree and shrub species to be retained.

Follow established guidelines for spacing, density, size class, number, and amounts of trees and understory species to be retained.

Ensure spacing of residual trees is appropriate to their size and species.

Identify pest problems, including insects, diseases, mammals, and invasive/noxious plants, and develop management guidelines.

Additional Criteria to Maintain Plant Diversity

Assess current conditions including ecological processes such as disturbance regimes, unique natural communities such as old-growth trees or stands, rock outcrops, gorges and coves, and rare and imperiled plant species including those that are state or federally listed, and water and soil resources.

Develop written guidelines addressing the management of these special plant species and their communities.

Native plant species should be inventoried and managed for vertical and horizontal structural complexity and understory species diversity.

Vary the criteria according to State, Federal or local requirements.

Additional Criteria to Improve Aesthetic and Recreational Values

Develop written guidelines to improve ecotourism and recreation, including hunting and fishing, where appropriate.

Select and manage plant materials adapted to the soil and climatic conditions and that fulfill a specific aesthetic or recreational need.

Additional Criteria to Improve Wildlife Habitat

Develop written guidelines to recognize and maintain forest resources for terrestrial, subterranean, and aquatic life, particularly considering habitat needs for species of concern.

Identify and develop specific management guidelines for habitat protection areas, including riparian buffers, critical habitats, and those with special needs.

Coordinate forest and wildlife management objectives and activities.

Additional Criteria to Maintain a Desired Understory Plant Community for Forest Products, Grazing, and Browsing

Develop written guidelines for inventorying plants, monitoring plant populations, and protecting the forest ecology while allowing the sustainable harvest of non-timber products.

Assess the impacts of timber production and harvest on the non-timber products.

Space trees properly to produce desired forage production, increase desirable woody plants for browsing, and provide conditions favorable for understory forest products.

CONSIDERATIONS

Consider adjacent and cumulative land use effects.

Consider social effects of decisions.

Assess potential landowner and user liability in the development of specifications for this practice.

PLANS AND SPECIFICATIONS

Plans and specifications shall be in keeping with this standard and shall describe the requirements for applying the practice to achieve its intended purpose(s).

The following components shall be included in the forest management plan:

- Statement of landowner's goals and objectives.
- Description of ecological and/or silvicultural systems and rationale for selection of silvicultural system.
- Maps of forest and soil types.
- SWAP map of areas used by species of concern.
- Inventory of the existing forest condition and a description of desired forest condition.
- Location of roads, property boundaries, protected areas.
- Planned management activities, including regeneration/harvest strategies and guidelines for addressing soil, water, air, plant, animal, and human resource problems and concerns. They may or may not be conservation practices.

OPERATION AND MAINTENANCE

Maintain a yearly summary of forest management activities and records of yield for all forest products harvested, including non-timber resources.

Conduct periodic inspections during and after treatment activities to ensure that the

purposes are achieved and resource damage is minimized; e.g., post harvest inspection, assessment of insects, disease, and other pests, storm damage, and damage by trespass. The results of the inspections shall determine the need for additional treatment under this practice.

Review timetables, schedules, and coordination actions periodically and modify as needed.

REFERENCES

Forest Stewardship Council-U.S. 2001. U.S. Regional Standards.

<http://www.fscus.org/documents/index.php>

Tennessee Department of Agriculture, Division of Forestry. *Guide To Forestry Best Management Practices in Tennessee*. 2003.

<http://www.state.tn.us/agriculture/forestry/bmpmanual.html>.